

APPENDIX A

**CHRONOLOGICAL LISTING OF TAPS RELATED
EVENTS FROM 1990 TO 2002**

1990

- The Governor and Department of Natural Resources Commissioner charges the State Pipeline Coordinator with the task of establishing and running coordinated pipeline oversight for TAPS and gas pipeline construction. The Federal Authorized Officer is also tasked to accomplish the same goal for the Federal government.
- One-stop permitting and coordinated oversight of common carrier oil and gas pipelines in Alaska is provided.
- The State of Alaska and the Trans-Alaska Pipeline System (TAPS) carriers enter into an Alternate Dispute Resolution regarding corrosion on TAPS. The State Pipeline Coordinator's Office (SPCO) acts as liaison between the State and Alyeska on the corrosion tariff settlement. The State Cooperative Corrosion Agreement resulted.

1991

- The JPO provides oversight of the Atigun Reroute Project to replace 8.5 miles of mainline pipe to remedy extensive corrosion in this section of pipe.
- The JPO developed general permits resulting in streamlining the permitting process.
- The JPO releases a report on the Thorpe Technical Services investigation concluding that the corrosion contractor performed satisfactorily. Program improvements were recommended.
- A technical resource library is established to house all pipeline-related documents and files submitted to the State.
- After the Exxon Valdez disaster, the office participated in the development of new oil spill contingency plans for the pipeline and terminal and coordinated multiple agency review and approval of the plans.
- The Incident Command System is adopted for oil spill responses, providing a unified organizational structure for government oil spill response.
- The General Accounting Office (GAO) issues a report entitled "Regulators Have Not Ensured That Government Requirements Are Being Met."
- JPO responds to GAO's recommendation to develop a multi-disciplinary monitoring plan to address three major areas of JPO responsibility: safety, pipeline integrity, and environmental issues.

1992

- A Corrosion Task Force evaluated the various corrosion causes, effects, and mitigation and prevention on TAPS. The task force studied Alyeska's pipeline corrosion control program for over two years, ultimately releasing a report requiring Alyeska to comply with several requirements.
- The Cooperative Corrosion Agreement is expanded and the TAPS Carriers dedicated \$23 million for enhanced cathodic protection and other corrosion remediation projects.
- Over 1,000 permits and authorizations are issued to Alyeska for their revised Oil Spill Contingency Plan.
- A monitoring plan for TAPS to ensure compliance with Grant and Lease Stipulations,

<p>regulations, and permit conditions is developed.</p> <ul style="list-style-type: none"> • Numerous reviews of projects necessary for the continued safe operation of TAPS were conducted including: slope stability at the Valdez Marine Terminal, ballast water treatment plant at the Terminal, and construction of 70 new roads for improved oil spill response. • Several complaints related to Alyeska employee concerns, environmental issues, and pipeline safety are filed with the office.
<p>1993</p>
<ul style="list-style-type: none"> • Energy and Commerce Sub-Committee hearings are conducted in July to examine safety-related issues on TAPS. Alyeska whistleblowers testified at the Congressional hearings. Pipeline oversight is expanded. • BLM/JPO contracted Quality Technology Corporation (QTC) to conduct an audit of TAPS to investigate reported safety allegations and problems. Findings are presented at Congressional hearings in November. QTC is additionally contracted to conduct a Phase II to produce recommendations designed to provide solutions to problem areas identified in the initial audit. • QTC and other audits identify 4,920 deficiencies on TAPS. • A review of TAPS facilities shut down due to declining throughput is conducted. Major impacts associated with pump station closure were engineering concerns, environmental concerns, impacts on the Grant and Lease, and oil spill contingency plans. • A toll-free hot line is established for reporting safety, environmental, and pipeline integrity issues as part of the new Employee Concerns Program. • Staff participates in 40 oil spill drills.
<p>1994</p>
<ul style="list-style-type: none"> • Reports to Congress alleging serious safety-related problems on TAPS; GAO, public, and media criticism; and several audits that substantiated problems prompted expanded oversight. • Oversight focus shifts from reacting to current problems to working with Alyeska in an early, proactive way. • Consultants are retained to help re-shape and train staff and provide technical back up. • A National Electric Code consultant, Jay Stewart Associates, is contracted to oversee the correction of electrical problems on TAPS. • Booz-Allen and Hamilton develop the Comprehensive Monitoring Program (CMP) for the JPO. This is a three-tier system starting with quick "snapshots" of items that are combined with similar observations into an assessment, ultimately leading to a stakeholder or CMP Report. • The JPO Quality Group is formed to focus on configuration management wherein hardware, design, and documentation are all in agreement. • The JPO oversaw Alyeska's efforts to correct the 4,920 deficiencies identified in 1993 through the Audit Action Item (AAI) resolution program. • The JPO Oil Spill Prevention, Preparedness, and Response Coordination Team is

formed.

- JPO is one of the first recipients of Vice President Al Gore's "Hammer Award" for reinventing government.
- The heads of 11 participating agencies sign the "Agreement to Support the State-Federal Joint Pipeline Office," thus forming the JPO Executive Council.
- In response to the passage of the 1990 Clean Air Act, Alyeska proposes their plan to install a vapor recovery system at the VMT to comply with the Environmental Protection Agency regulations.

1995

- GAO releases its report "Actions to Improve Safety are Under Way", concluding that JPO is on the right path to improve oversight.
- Alyeska is granted conditional approval of its Quality Assurance Program contingent upon satisfactory implementation of the program by March 31, 1996.
- The Department of Interior and Alyeska sign an agreement for a comprehensive program of training and employment for Alaska Natives.
- External Affairs is proactively working to reestablish public trust and improve lines of communication with all stakeholders.
- Audit Action Item resolution oversight continued.
- The Prince William Sound Tanker Oil Spill Contingency Plan is approved.
- An investigation was initiated because of reports received from concern citizens that maintenance on the VMT vapor recovery system piping was inadequate.

1996

- Alyeska's Quality Assurance Program is approved.
- Alyeska and JPO implemented similar Incident Command Systems to complete project implementation.
- Pump Stations 8 and 10 are "ramped down" due to reduced throughput.
- A crude oil leak near Check Value 92 discharges approximately 38,750 gallons from a leak in a plug or "thredolet" on a six-inch bypass line. A Memorandum of Agreement with Alyeska is developed to specify the processes and schedule to be followed in testing mainline valves for internal leak through and in assessing the risk of any valves that are found to not provide a proper internal seal and necessary repairs.
- Alyeska agrees to accelerate replacement of the carbon steel piping with stainless steel piping in the vapor recovery system at the VMT.
- JPO staff is awarded the "Excellence in Government Service Award" from the Governor for their unique contributions by achieving efficiency in government through interagency partnership.
- Cathodic protection (CP) "coupons" are introduced to monitor whether the cathodic protection system is providing acceptable corrosion protection on TAPS. JPO participates in the design of the enhanced cathodic protection systems and research projects to develop more effective means of corrosion control. A Coupon Monitoring Agreement to measure cathodic protection on TAPS is signed by the Alaska

Department of Natural Resources, Bureau of Land Management, U.S. Department of Transportation, and Alyeska. Under the State Cooperative Agreement, Alyeska commits to a \$23 million dollar plan to install active, impressed current cathodic protection to troublesome areas.

- Pipe vibrations are detected at Thompson Pass near Valdez. The problem is compounded by the presence of a pig-detected dent at the location of maximum vibration. False soil gas alarms of spills heightens concern. Alyeska excavates the location and sleeved the pipe. A backpressure control system to mitigate the vibrations is constructed at the VMT. Battelle Labs is commissioned to independently review vibration effects.

1997

- Approximately 125 miles, or one-third of the below ground pipe, is placed under impressed current cathodic protection under the State Cooperative Agreement.
- TAPS acquires a new communication system, Supervisory Control and Data Acquisition (SCADA).
- Internal leak-through in some TAPS valves led to examining the valve sealing performance in both open and closed positions. Acceptable criteria for rate performance were discussed, as no industry standards exist. A Memorandum of Agreement for testing is signed with Alyeska.
- Over 130 surveillance reports and eight assessments are completed under JPO's Comprehensive Monitoring Program.
- A questionnaire is distributed to Alyeska and contractors to develop a base line for the employee concerns program. A Comprehensive Monitoring Report with results is issued.
- U.S. Department of Transportation regulations require valves to be in good working order. BLM's Authorized Officer recommends full closure operation during a 1994 TAPS maintenance shut down. Valve sealing problems are noticed at Remote Gate Valve 60. After several Alyeska efforts failed to fix the problem, a Memorandum of Agreement is signed to test sealing performance of mainline valves - an industry first.
- The Environmental Protection Agency air quality regulations require construction of a vapor recovery system at the VMT on tanker loading Berths 4 and 5. Monitoring reveals several quality assurance shortcomings and many National Electric Code violations that have since been corrected.
- A corrosion excavation is conducted at Wilber Creek. This was a challenging excavation to deep pipe burial and steep slopes. Deficiencies are identified in quality controls/inspections and JPO inspectors were harassed at the site. The U.S. Department of Transportation/Office of Pipeline Safety levied a civil penalty and compliance order for a violation. Alyeska sleeved the pipe, stopped work due to quality problems, and instituted additional Alyeska controls over the contractor after the stop work. Occupational Safety and Health experts reviewed the excavation for safety.
- Alyeska's compliance with Section 29 of the Grant is audited. A Comprehensive Monitoring Report resulted.
- TAPS throughput fell below 1.3 million barrels per day. Pump Stations 2 and 6 are taken off line and all three "topping unit" refineries are shut down eliminating

significant operational risk on TAPS. The shut down pump stations are required to be maintained for pipeline restart within a 180- day window to maintain throughput of 2.1 million barrels per day.

- Vapor leaks are detected on the vapor recovery piping between the VMT powerhouse and the storage tanks. An extensive engineering evaluation is conducted of Alyeska's proposed pipe replacement program. Much of the system is replaced with stainless steel pipe and the problem corrected.
- Field offices are established in Fairbanks and Valdez.
- The JPO Executive Council renews the Agreement to Support the State-Federal JPO for another three years.
- TAPS turns 20.

1998

- A new work plan is implemented outlining and scheduling commitments for the year.
- As a result of the Valve Agreement with Alyeska, Remote Gate Valve 80 is replaced and Check Valve 122 is repaired during a planned maintenance shut down. The exercises are monitored to ensure safety and quality program compliance. Replacement/repairs are conducted without a single unsatisfactory determination.
- The Tanker Vapor Control System project at the VMT is closely monitored surfacing operations, training, and procedural problems that result in corrective actions. The Department of Labor identifies numerous National Electric Code violations. Repeated reviews confirm that qualified "certificate of fitness" holders are performing electrical work, contrary to allegations. Two assessments and a report describing concerns and deficiencies are issued. JPO, Coast Guard, Regional Citizens Advisory Council, and Alyeska participated in a system-wide function and risk review.
- Oversight of Alyeska's Employee Concerns Program is expanded.
- An agreement is entered into with Alyeska to develop a Geographical Information System (GIS). A GIS will greatly enhance oil spill contingency review and issue management. Additional improvements are planned.
- Comprehensive Monitoring Reports are issued on Alyeska's Environmental Protection Program; Safety; Project Performance; Operations; and Maintenance.
- Using the results of the 1997 JPO Comprehensive Monitoring Program evaluation, the Department of Interior and Alyeska renegotiate the 1995 Alaska Native Utilization Agreement. A process to review and add additional contractors under the agreement is included.
- The Mainline Oil Spill Response Plan is reviewed and approved. This is the first comprehensive interagency review of the plan after 1991.
- Alyeska's Y2K plans are monitored.
- New technology is evaluated for improved leak detection on TAPS. Existing TAPS leak detection is the best available technology but cannot detect small leaks. This issue is worked with NASA, Argonne Labs, and the Jet Propulsion Laboratory to assess leak detection possibilities.

1999

- The State and Federal rights-of-way expire in 2004 and must be renewed.
- Five of the 4,920 Audit Action Items remained open at the beginning of 1999.
- A compliance database is developed and tested.
- A surprise drill called at the VMT identifies some deficiencies.
- Comprehensive Monitoring Reports are released evaluating Alyeska operation of TAPS and selected portions of the TAPS Maintenance Program.
- The first phase of the Geographical Information System (GIS) is completed.
- Shortcomings in the Valdez Tanker Vapor Control System are identified. Alyeska, the Coast Guard, and JPO initiated a comprehensive review of the system. Two assessments are released.
- Alyeska's Corrosion Control Management Plan is approved.
- A group of six anonymous Alyeska whistleblowers allege continued safety concerns on TAPS. Research reveals most issues are old, well known, often reported, and long resolved. A matrix and statement of findings for the allegations is prepared to provide a historical account and status of each allegation.
- Alyeska's VMT Oil Spill Contingency Plan is reviewed by the agencies and is up for renewal in 2000.
- An Order is issued to Alyeska to conduct a functional test of all crude oil storage tanks at the VMT with a subsurface foam dispensing piping system.
- An Order is issued to Alyeska to replace all non-plenum (ventilation air duct) rated cables in the Operations Control Center at the VMT.
- An assessment of the VMT Fire Suppression System is released.
- A second Order is issued to Alyeska on the VMT Fire Suppression System establishing priorities and time frames for work accomplishment.
- An Order is issued to Alyeska to develop a corrective action plan for slope stability and aboveground pipeline maintenance on Squirrel Creek slopes.
- A Notice is issued to Alyeska regarding closure of the five remaining Audit Action Items.
- An Order is issued to Alyeska on oil spill response plans related to workpad bridges.
- A Notice is issued to Alyeska regarding compulsory redesign of the VMT Tanker Vapor Control System.
- An Order is issued to Alyeska to implement corrective action at Grey Stream. Grey Stream abandoned its original channel and formed a new channel upstream and across the pipeline right-of-way blocking fish passage.
- An Order is issued to Alyeska to provide a final schedule for development and implementation of the cold restart procedure for TAPS.
- A Y2K crossover plan is developed to monitor Alyeska's status. The transition went smoothly with no major glitches.
- The agreement to inspect and test all valves led to the replacement of Remote Gate Valve 60 near the Yukon River during a planned maintenance shutdown. Previous valve testing identified that this valve had unacceptable internal leak through preventing it from tightly sealing. During the 1998 planned maintenance shutdown Remote Gate Valve 80, north of Delta Junction, is replaced and check valve 122,

north of Valdez is repaired in place.

- Auditors from the Department of Interior initiate an audit to evaluate oversight effectiveness and to determine if there has been adequate resolution of deficiencies. Three recommendations are made.

2000

- Two of the 4,920 Audit Action Items remain at the end of 2000.
- An agreement is signed with the State Department of Public Safety, Division of Fire Prevention to provide assistance in the oversight of the TAPS.
- The Orders issued in 1999 on Squirrel Creek, non-plenum cables, Pung's Crossing Bridge, and Grey Stream are closed.
- Allegations regarding code and regulatory violations are received on the North Pole Metering Facility. An inter-agency team is formed to investigate. The team reported the results.
- An assessment of Alyeska's suppliers is released.
- Eighteen JPO personnel participate in an oil spill drill exercise at Minton Creek.
- The second assessment of Alyeska's Risk Management Program is released.
- An assessment of Operations Material Sites is released.
- An assessment entitled Alyeska 1999 Flood Damage Report Project (F075) is issued.
- New State regulations are adopted to provide a process for the renewal of pipeline rights-of-way, including the TAPS, on State-owned land.
- The US Department of the Interior, Bureau of Land Management and Alaska Department of Natural Resources sign a Memorandum of Understanding describing responsibilities and procedures for renewal of Federal and State rights-of-way for TAPS and related facilities.
- The Federal Authorized Officer grant approval of the VMT Oil Discharge Prevention and Contingency Plan.
- A fatality is investigated at the VMT when a technician driving a dump truck rolled over an embankment.
- The JPO office in Valdez is relocated to offices located in the airport terminal.
- Two contracts are let to study the condition of maintenance and long-term reliability of TAPS.
- The results of a third survey to assess TAPS workers' attitudes about their work environment and effectiveness of Alyeska and contractor employee concerns programs are released.

2001

- Two of the 4,920 Audit Action Items remained open at the end of 2001. AAI 1955, Change Management is being reviewed for closure in 2002. A Memorandum of Understanding for AAI 2076, Remote Gate Valve Upgrades is being developed for signature in 2002.
- Mineral Management Service requests membership in the JPO.
- The TAPS right-of-way Brushing Policy is jointly modified with Alyeska.
- JPO closes an Order to clean and inspect tanks and develop interim contingency measures at the VMT.

- The eighth, ninth, and tenth CMP reports are released. For the first time functional areas covered in prior CMP report are re-examined for operations, construction, and maintenance.
- In March 2001, Det Norske Veritas (DNV) is contracted to provide a report of Alyeska's compliance with the Lease/Grant requirements. DNV identified instances where Alyeska is not in compliance with requirements and where Alyeska's systems for assuring compliance could be improved. The findings are submitted to Alyeska along with recommendations for improvement. DNV monitored Alyeska's progress to correct the issues identified.
- The TAPS owners submit applications to renew the Federal Grant and State Lease. A joint team is assembled to conduct the various processes for renewal.
- Argonne National Lab is contracted to prepare the Environmental Impact Statement (EIS) for the TAPS right-of-way renewal.
- A 60-day scoping period is provided in preparation of the EIS for renewal.
- Government to government meetings/briefings are conducted for renewal.
- JPO requests Alyeska to test their Earthquake Monitoring System.
- In 1996/97, JPO and Alyeska agreed to a schedule to test mainline valves for internal leak through. A Memorandum of Agreement resulted. Several valves have been repaired or replaced as a direct result. The goals were met and the MOA closed. A plan for future testing and repairs is in place.
- JPO participated in Alyeska's large-scale contingency plan exercise June 27, 2001 (Lowe River Oil Spill Drill) in Valdez. Federal and State agencies, Alyeska staff from the interior of Alaska, Ship Escort and Response Vessel Service, Coast Guard, and City of Valdez representatives also participated.
- The oil spill contingency plan for TAPS is renewed for three years by the Alaska Department of Environmental Conservation and for one year by the Bureau of Land Management.
- A bullet pierced TAPS Thursday, October 4 near Milepost 400. The pipeline is shut down and repaired. A joint agency and Alyeska "After Action Report" results in several recommendations for future improvements.
- In light of the September 11 terrorist attacks, security for pipeline and energy resources took front and center stage. Many additional safeguards are put in place.
- Increased Grant and Lease Section and Stipulation compliance oversight activities are laid out in the 2001 Work Plan. Two major reports are to result: Compliance and Sustained Useful Life of TAPS. The Compliance report was issued in May 2002.

2002 – Through June

- Lease Interpretations are approved by the SPC in February 2002 providing the JPO staff with standardized interpretations of the Lease. The manual provides the language for each section/stipulation, the scope of the interpretation, interpretation of the section/stipulation, if there are any related requirements and the background. Policies that apply to a particular stipulation are referenced in the background section for further guidance.
- Alyeska develops a compliance manual known as the GL-2 in April 2002 to address requirements of the Lease/Grant. The manual provides the original language from the Lease/Grant as well as the SPC/AO interpretation or clarification of the original

language and Alyeska's method of assuring compliance with the agreements. The manual provides guidance and methods for compliance with each section and stipulation of the Lease/Grant.

- The Reliability Centered Maintenance (RCM) protocol was developed in 2001 for maintenance and expanded in 2002 to include critical systems. The RCM describes their function, determines how they can fail to perform that function, evaluate the consequences of this failure and determine how failure can be mitigated or prevented.
- CMP reports 11 (CMP-02-C-001, Examining Grant and Lease Compliance) and 12 (CMP-02-C-002, TAPS Maintenance and Sustained Useful Life) are published.
- The State Pipeline Coordinator, representing the JPO, conducted an audit of Det Norske Veritas processes and procedures for conducting the verification and the closure of audit findings.
- JPO and Alyeska enter into an MOA that outlines the interim and longer-term strengthening of Alyeska's corrective actions.